

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION DR-668

Effective Date: February 1, 2014  
Reevaluation Date: **February 2018**

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**.*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

**IR350/500 HW Aluminum Glazed Outswing Hinged Doors, Impact Resistant**, manufactured by

**Kawneer Company, Inc.**  
**555 Guthridge Court**  
**Norcross, Georgia 30092-3503**  
**Telephone: (770) 840 - 6426**

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

This evaluation report is for IR350/500 HW aluminum glazed outswing hinged doors. The aluminum glazed outswing hinged doors are used for commercial curtain wall and storefront installations.

### General Description:

This evaluation report includes the following hinged door assemblies:

Double Door with Trifab 450, 451 or IR500/501 Framing  
Single Door with Trifab 450, 451 or IR500/501 Framing  
Double Door within 1600 System 1 Curtain Wall

**Curtain Wall and Storefront:** Curtain wall and storefront framing referenced in this product evaluation report are the Trifab 450, 451; the IR500/501; or the 1600 System 1. The curtain wall and storefront framing are not part of this product evaluation report. Curtain wall and storefront framing used with these assemblies shall be listed in a separate Texas Department of Insurance product evaluation report.

**Product Identification:** A manufacturer-produced label shall be applied to the door assembly. The label includes the manufacturer's name (Kawneer); the product name (IR350/500 HW Door); that the design pressure and size are per drawing #1821T; and that the product complies with ASTM E 330, ASTM E 1886, ASTM E 1996, Large Missile Impact, Zone 4-Level D.

## LIMITATIONS

**Design Drawings:** The door assemblies shall be installed in accordance with the following drawing:

Drawing No. 1821T, titled "IR350/500 HW Wind Zone 4 L.M.I. Out-Swing Doors," Sheets 1 thru 12 of 12, dated March 19, 2013, signed and sealed by Warren W. Schaeffer., P.E on March 20, 2013. The stated drawings will be referred to as the approved drawings in this evaluation report.

**Fabrication and Assembly:** Kawneer aluminum glazed outswing hinged doors are fabricated in the factory. The aluminum glazed outswing hinged doors are assembled and glazed at the jobsite. The approved drawings referenced in this evaluation report indicate the options for the glazing construction.

**Design pressure (DP):** Maximum design pressure:  $\pm 110$  psf. The allowable design pressure varies depending on door type (double or single), door geometry, hardware (lock option) used, and glass option. Refer to the approved drawings for specific design pressure requirements.

If the doors are used with curtain wall or storefront framing, then the design pressure rating of the complete assembly shall be the lesser of the allowable design pressure rating for the curtain wall or storefront framing and the doors in this evaluation report

**Hardware:** Hardware options are specified on the approved drawings. The allowable design pressure for the door assembly varies as a function of the hardware option used. Refer to the approved drawings for allowable hardware options and specific design pressure requirements.

**Impact Resistance:** These door assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I** and **Seaward** zones. These assemblies have passed an impact criteria equivalent to Missile Level D specified in ASTM E 1996-04. These assemblies may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded. These assemblies will not need to be protected with an impact protective system when installed in areas where windborne debris protection is required.

## INSTALLATION INSTRUCTIONS

**General:** The assembly shall be prepared and installed in accordance with the manufacturer's recommended installation instructions. Detailed installation instructions are available from the manufacturer.

### Installation:

**Wall Framing Construction:** The aluminum glazed outswing hinged door assemblies may be mounted to several types of wall framing construction. The types of wall framing construction allowed include:

- Concrete (minimum compressive strength: 3,000 psi)
- Wood dimension lumber (minimum Southern Yellow Pine)
- Masonry – (ASTM C-90, Grade N, Type 1 or greater)
- Steel studs (minimum 16 gauge, 33 ksi)
- Steel (1/8" thick, A36 (minimum  $F_y = 36$  ksi))
- Aluminum (0.100" thick 6063-T5)

**Fastener Requirements:**

- Refer to the approved drawings for the anchor layout and notes.
- Refer to the approved drawings for the minimum embedment depths for the fasteners and the minimum edge distances (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

**Note:** The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.